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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,934	04/02/2004	Shinya Takyu	02887.0274	9440

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EXAMINER

KEBEDE, BROOK

ART UNIT PAPER NUMBER

2823

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,934

Applicant(s)

TAKYU ET AL.

Examiner

Brook Kebede

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/2/04; 9/20/04; 10/21/04 (6n)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-25 of copending Application No. 10/808,298. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons:

Re claims 1-20, the claimed subject matter of the instant application is essentially claimed in the claimed limitation of the copending application of 10/808,298. For example, the scope of claims 1 and 11 of the instant application is similar to that of the scope of claims 19-25 of copending application of 10/808,298. In addition, the scope of claims 2-10 and 12-20 of the instant application is also within the scope of claims 19-25 of copending application of 10/808,298. The only difference is that the claims are rearranged and minor difference in the

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wording of the claim language. Therefore, the conflicting are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-11 and 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugino et al. (EP/ 1107299 A2).

Re claim 1, Sugino et al. disclose a manufacturing method of a semiconductor device, comprising: providing a groove (2) having a thickness equal to or larger than a finishing thickness on a first surface of a semiconductor wafer (1) on which a semiconductor element is formed (see Fig. 1); affixing a pressure sensitive adhesive (PSA) tape (10) onto the first surface of the semiconductor wafer (1) in which the groove is formed (see Fig. 2); reducing the thickness of the semiconductor wafer (1) by processing a second surface opposite to the first surface of the semiconductor wafer (1) onto which the PSA tape is affixed (see Fig. 3), so as to separate the semiconductor wafer into a plurality of semiconductor chips (see Fig. 4) on which the semiconductor element is formed; affixing an adhesive layer onto (20) an entire rear surface of the separated semiconductor wafer (see Fig. 4); cutting the adhesive layer so as to separate the adhesive layer for each of the semiconductor chips (3) (see Fig. 5); and peeling off the PSA tape from the semiconductor wafer while fixing the semiconductor wafer under suction

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by use of a porous member segmented into at least two sucking areas (see Figs. 1-6 and related text in Pages 2-6).

Re claim 4, as applied to claim 1 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the PSA tape is constituted of a thermal shrinkable film base material and an adhesive layer, and can be peeled off from the semiconductor wafer by thermal contraction (see Figs. 1-6 and related text in Pages 2-6).

Re claim 5, as applied to claim 4 above, Sugino et al. disclose all the claimed limitations including the limitation wherein an adhesive of the PSA tape is a UV curable (i.e., light energy curable) adhesive (see Figs. 1-6 and related text in Pages 2-6).

Re claim 6, as applied to claim 5 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the PSA tape is peeled off after UV irradiation (see Figs. 1-6 and related text in Pages 2-6).

Re claim 7, as applied to claim 1 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the groove is provided by any of blade dicing, a laser, etching and cleaving (see Figs. 1-6 and related text in Pages 2-6).

Re claim 8, as applied to claim 1 above, Sugino et al. disclose all the claimed limitations including the limitation etching the first surface after reducing the thickness of the semiconductor wafer (see Figs. 1-6 and related text in Pages 2-6).

Re claim 9, as applied to claim 1 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the adhesive layer is a thermosetting adhesive layer having a curable material (see Figs. 1-6 and related text in Pages 2-6).

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Re claim 10, as applied to claim 1 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the adhesive layer is cut by any of a blade, laser and etching (see Figs. 1-6 and related text in Pages 2-6).

Re claim 11, A manufacturing method of a semiconductor device, comprising: providing a groove (2) having a thickness equal to or larger than a finishing thickness on a first surface of a semiconductor wafer (1) (see Fig. 1) on which a semiconductor element is formed; affixing a pressure sensitive adhesive (PSA) tape (10) onto the first surface of the semiconductor wafer (1) in which the groove is formed (see Fig. 2; reducing the thickness of the semiconductor wafer (1) by processing a second surface opposite to the first surface of the semiconductor wafer (1) onto which the PSA tape (10) is affixed, so as to separate the semiconductor wafer into a plurality of semiconductor chips on which the semiconductor element is formed (see Fig. 3); affixing an adhesive layer (22) onto an entire rear surface of the separated semiconductor wafer; peeling off the PSA (20) tape from the semiconductor wafer while fixing the semiconductor wafer, to which the adhesive layer is affixed, under suction by use of a porous member segmented into at least two sucking areas; and cutting the adhesive layer affixed onto the entire second surface so as to separate the adhesive layer for each of the semiconductor chips, while fixing the semiconductor wafer, from which the PSA tape has been peeled off, onto the porous member under suction (see Figs. 1-6 and related text in Pages 2-6).

Re claim 14, as applied to claim 11 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the PSA tape is constituted of a thermal shrinkable film base material and the adhesive layer, and can be peeled off from the semiconductor wafer by thermal contraction (see Figs. 1-6 and related text in Pages 2-6).

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Re claim 15, as applied to claim 14 above, Sugino et al. disclose all the claimed limitations including the limitation wherein an adhesive of the PSA tape is a UV curable adhesive (see Figs. 1-6 and related text in Pages 2-6).

Re claim 16, as applied to claim 15 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the PSA tape is peeled off after UV irradiation (see Figs. 1-6 and related text in Pages 2-6).

Re claim 17, as applied to claim 11 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the groove is provided by any of blade dicing, a laser, etching and cleaving (see Figs. 1-6 and related text in Pages 2-6).

Re claim 18, as applied to claim 11 above, Sugino et al. disclose all the claimed limitations including the limitation etching the first surface after reducing the thickness of the semiconductor wafer (see Figs. 1-6 and related text in Pages 2-6).

Re claim 19, as applied to claim 11 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the adhesive layer is a thermosetting adhesive layer having a curable material (see Figs. 1-6 and related text in Pages 2-6).

Re claim 20, as applied to claim 11 above, Sugino et al. disclose all the claimed limitations including the limitation wherein the adhesive layer is cut by any of a blade, laser and etching (see Figs. 1-6 and related text in Pages 2-6).

Allowable Subject Matter

6. Claims 2, 3, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In addition the provisional rejection under the judicially

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created doctrine of obviousness-type double patenting that set forth in Paragraph 3 above must be overcome.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Tokubuchi et al. (JP/2000195878) also disclose similar inventive subject matter.

Correspondence

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brook Kebede whose telephone number is (571) 272-1862. The examiner can normally be reached on 8-5 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (571) 272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brook Kebede
Examiner
Art Unit 2823

Brook Kebede

BK
February 19, 2005